

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (canceled)
2. (currently amended) The method of claim 1 wherein said first interface signal is of a frequency centered at or near a first interface frequency not at baseband.
3. (original) The method of claim 2 wherein said first interface frequency is an Intermediate Frequency (IF) or a Radio Frequency (RF) frequency.
4. (currently amended) The method of claim 1 wherein said second interface signal is an IF or RF frequency.
5. (currently amended) The method of claim 1 wherein said third interface signal is of a frequency centered at or near a third interface frequency not at baseband.
6. (original) The method of claim 5 wherein said third interface frequency is an IF or RF frequency.
7. (currently amended) The method according to claim 1 wherein said first, second and third interface signals are provided or outputted at readily accessible locations.
8. (currently amended) The method according to claim 1 wherein said second interface signal is provided from a point in its signal path immediately preceding a signal emission stage.
9. (currently amended) A method for providing self-interference cancellation in two-way relayed electromagnetic communication between a first device and a second device through a relay station comprising the steps of:
generating at said first device a modulated near signal;
transmitting said modulated near signal from said first device to said relay station;

receiving at said first device a composite signal from said relay station, said composite signal containing a relayed version of said modulated near signal and a relayed version of a modulated far signal transmitted from said second device;

providing said composite signal in a representation as a first interface signal to a canceler module of said first device;

providing a representation of said modulated near signal as a second interface signal to said canceler module, said second interface signal being of a frequency centered at or near a second interface frequency not at baseband;

canceling at said canceler module a portion of said relayed version of said modulated near signal from said representation of said composite signal using said second interface signal to produce a cancellation-processed signal;

outputting said cancellation-processed signal as a third interface signal from said canceler module; and

~~The method according to claim 1~~ wherein said canceling step includes: applying a time delay and phase rotation to a representation of said second interface signal to obtain a time-delayed and phase-rotated local near signal; correlating said time-delayed and phase-rotated local near signal with at least a representation of said first interface signal to obtain correction signals for said time-delayed and phase-rotated local near signal; adaptively filtering said time-delayed and phase-rotated local near signal to produce a filtered signal; and applying said filtered signal with said at least said representation of said composite signal to yield said cancellation-processed signal.

10. (original) The method according to claim 9 wherein said canceling step includes: downconverting said first interface signal to produce said representation of said first interface signal; downconverting said second interface signal to produce said representation of said second interface signal; and upconverting said cancellation-processed signal to produce said third interface signal.

11. (canceled).

12. (currently amended) The method of claim ~~11~~ 29 wherein said transmitter equipment includes an upconverter, a downconverter, or a mixer.

13. (currently amended) The method of claim ~~11~~ 29 wherein said transmitter equipment includes an amplifier.

14. (original) The method of claim 13 wherein said amplifier is a high power amplifier (HPA).

15. (currently amended) The method of claim ~~11~~ 29 wherein said transmitter equipment includes an antenna.

16. (currently amended) The method of claim ~~11~~ 29 wherein said transmitter equipment includes a splitter, combiner, or splitter/combiner.

17. (currently amended) The method of claim ~~11~~ 29 wherein said receiver equipment includes an upconverter, a downconverter, or a mixer.

18. (currently amended) The method of claim ~~11~~ 29 wherein said receiver equipment includes an amplifier.

19. (original) The method of claim 18 wherein said amplifier is a low noise amplifier (LNA).

20. (currently amended) The method of claim ~~11~~ 29 wherein said receiver equipment includes an antenna.

21. (currently amended) The method of claim ~~11~~ 29 wherein said receiver equipment includes a splitter, combiner, or splitter/combiner.

22. (currently amended) The method of claim ~~11~~ 29 wherein said first interface signal is of a frequency centered at or near a first interface frequency.

23. (original) The method of claim of claim 22 wherein said first interface frequency is an Intermediate Frequency (IF) or a Radio Frequency (RF).

24. (currently amended) The method of claim ~~11~~ 29 wherein said second interface frequency is an IF or RF frequency.

25. (currently amended) The method of claim ~~11~~ 29 wherein said third interface signal is of a frequency centered at or near a third interface frequency.

26. (original) The method of claim of claim 25 wherein said third interface frequency is an IF or RF frequency.

27. (currently amended) The method according to claim ~~11~~ 29 wherein said first, second and third interface signals are provided or outputted at readily accessible locations.

28. (currently amended) The method according to claim ~~11~~ 29 wherein said second interface signal is provided from a point in its signal path immediately preceding a signal emission stage.

29. (currently amended) A method for retrofitting a first device for self-interference cancellation capability in two-way relayed electromagnetic communication between said first device and a second device through a relay station, said first device having an existing modulator unit, an existing transmitter equipment, an existing receiver equipment and an existing demodulator unit, said method comprising the steps of:

providing a composite signal in a representation as a first interface signal from said receiver equipment to a canceler module of said first device, said composite signal containing a relayed version of a modulated near signal transmitted from said first device and a relayed version of a modulated far signal transmitted from said second device;

providing a representation of said modulated near signal as a second interface signal from said modulator unit to said canceler module, said second interface signal also provided to said transmitter equipment, said second interface signal being of a frequency centered at or near a second interface frequency not at baseband;

canceling at said canceler module a portion of said relayed version of said modulated near signal from said representation of said composite signal using said second interface signal to produce a cancellation-processed signal; and

outputting said cancellation-processed signal as a third interface signal from said canceler module to said demodulator unit; and

~~The method according to claim 11~~ wherein said canceling step includes: applying a time delay and phase rotation to a representation of said second interface signal to obtain a

time-delayed and phase-rotated local near signal; correlating said time-delayed and phase-rotated local near signal with at least a representation of said first interface signal to obtain correction signals for said time-delayed and phase-rotated local near signal; adaptively filtering said time-delayed and phase-rotated local near signal to produce a filtered signal; and applying said filtered signal with said at least said representation of said composite signal to yield said cancellation-processed signal.

30. (original) The method according to claim 29 wherein said canceling step includes: downconverting said first interface signal to produce said representation of said first interface signal; downconverting said second interface signal to produce said representation of said second interface signal; and upconverting said cancellation-processed signal to produce said third interface signal.

31. (canceled).

32. (canceled).

33. (canceled).